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EXAMINER	
KIM, PAUL	

ART UNIT	PAPER NUMBER
2169	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No.	Applicant(s)	
	10/748,399	WEISSMAN ET AL.	
	Examiner	Art Unit	
	PAUL KIM	2169	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/8/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office action is responsive to the following communication: Request for Continued Examination filed on 2 September 2008.

2. Claims 1-42 are pending and present for examination.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2 September 2008 has been entered.

Response to Amendment

4. Claims 1, 3-4, 7-10, 12, 20, 22-23, 26-29, 31, and 41 have been amended.

5. No claims have been added.

6. No claims have been cancelled.

Information Disclosure Statement

7. The information disclosure statement (IDS) submitted on 8 August 2008 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

8. The disclosure is objected to because of the following informalities:

a. Specification, paragraph [0019], the following sentence is objected to:

> "Other examples of suitable media include, but are not limited to, a floppy disk, CD-ROM, magnetic disk, memory chip, ROM, RAM, an ASIC, a configured processor, all optical media, all magnetic tape or other magnetic media, or any other medium from which a computer processor can read instructions. Also, various other forms of computer-readable media may transmit or carry instructions to a computer, including a router, private or public network, or other transmission device or channel, both wired and wireless."

While it is proper to say that a transmission medium transmits data (including program code), it is not proper nor correct to say that a transmission medium "implements" code by the activity of transporting the code.

> Examiner's Note: For example, in the case of an optical medium storing code the "implementing" of the code means that certain regions of the optical disk material have been tangibly (physically, structurally) altered so that these regions reflect laser light differently when they have stored a "0" rather than a "1". And, in the optical disk, a particular region is tangibly changed by the implementation process, for example, a write consists of a laser "burn" of that region to make a tangible difference in the media. However, in the case of a wired (or wireless) network path over which so-called "implemented" code is being transmitted, there is no tangible (physical, structural) change to the transmission media, whether air, space, optical fiber, or copper wire.

In the above language there is no equivalent process to the laser "burn" in relation to the transmission medium when a transmitted electromagnetic carrier wave transports embedded program code across a transmission path of a network. The transmission of program code across such a transmission medium is an entirely different process than the storage of program code in a storage medium because the transmission media does not experience any tangible, structural change by the process of transmission (or the so-called "implementation").

See *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02. MPEP 2106. "*The claimed invention as a whole must accomplish a practical application. That is, it must produce a 'useful, concrete and tangible result'* "(emphasis added).

In the above language,

i. The claimed invention (program code being transported across a wireless medium) does not accomplish any useful, concrete and tangible result because the code does not tangibly, structurally alter the medium, and

ii. The code has not functionality in the state of being transmitted because the embedded code cannot be executed as there does not exist any known processor able to execute the transmitted program code while in the process of

> being transmitted. Before the transmitted program code can be executed it must first be received and extracted from the transmission encoded carrier wave, and then stored on a suitable computer readable medium from which it can be executed by a processor as a functional part of a computer machine which includes the processor and the stored code. Until these steps are taken the transmitted program code has no program functionality, but instead, in the transmitted state the transmitted code can only represent, or is equivalent to, non-functional descriptive material.

Therefore, the Specification erroneously asserts that program code being transmitted across a transmission medium somehow represents "implemented code." However, this is not true because the Specification does not teach details of how such an "implementation" makes any tangible (Physical, structural) alteration of the transmission media, or how the transmitted code can be executed by a processor while in the state of being transmitted. The state of the above language would require undue experimentation by one of ordinary skill in the art to read Applicant's disclosure and then to accomplish tangible implementation of the transmitted program code or to accomplish execution of the transmitted program code.

Applicant's interpretation contradicts *State Street*, because first, when program code is being transmitted in any of the examples of transmission media listed above, no tangible (physical, structural) change has been made to the transmission media by the so-called "implementation" of the transmitted. Secondly, program code being transmitted cannot be executed by any known processor to perform any of the code's intended functionality, because in that state, the transmitted code remains nothing more than non-functional descriptive material.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. **Claims 20-39** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed toward "computer readable media" transmitted to a computer using "a router, private or public network, or other transmission device or channel, both wired and wireless" and are non-statutory because they encompass subject matter and/or embodiments which do not fall within a statutory category.

The meaning of "computer readable media" as disclosed in the Specification, paragraph [0019], covers non-statutory embodiments which improperly include network transmission lines (interpreted as wired and wireless transmission), wireless transmission media, signals propagating through space, radio waves, infrared signals, etc. For the aforementioned reasons discussed in the objections to the Specification, paragraphs [0019], which are incorporated herein, the claimed invention does not properly cover only statutory subject matter (e.g., program code being transmitted over wired or wireless transmission media) because in such a case there is no tangible embodiment of program code in a computer readable medium executed by a processor, and further because the disclose program code being transmitted across the transmission media cannot be executed by any known processor. Therefore, the transmitted program code lacks functional capability because, absent execution, it cannot cause any of the claimed operations to be performed, and so, in the state of being transmitted, the program code represents nothing more than non-functional descriptive material. Moreover, under 35 U.S.C. § 101, signals propagating through space, radio waves, and infrared signals are not permissible "articles of manufacture" because they have no tangible embodiment.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time

the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. **Claims 1-11, 15-30, 34-40, and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wical et al (U.S. Patent No. 6,101,515, hereinafter referred to as WICAL), filed on 31 May 1996, and issued on 8 August 2000, in view of Wical et al (U.S. Patent No. 6,038,560, hereinafter referred to as WICAL '560), filed on 21 May 1997, and issued on 14 March 2000, in further view of Borgida et al (U.S. Patent No. 5,806,060, hereinafter referred to as BORGIDA), filed on 23 April 1997, and issued on 8 September 1998, and in further view of Wical et al (U.S. Patent No. 5,930,788, hereinafter referred to as WICAL '788), filed on 17 July 1997, and issued on 27 July 1999.

13. **As per independent claims 1 and 20**, WICAL, in combination with WICAL '560, BORGIDA, and WICAL '788, discloses:

A machine-implemented method, comprising:

receiving, from a user {See WICAL '560, C4:L39-44, wherein this reads over "[a] user, by processing documents in the content processing system described herein, may compile a knowledge base that associates terms of the documents with categories of a classification system to develop contextual associations for terminology"}, a primary term representing a new first concept to be created in an existing machine-readable network of interrelated concepts {See WICAL, col. 4, lines 49-65, wherein this reads over "the learning system may select the high level category 'business and economics'"}, wherein a concept comprises a normalized semantic representation;

receiving, from the user, at least one related term associated with the primary term and representing the new first concept {See WICAL, col. 4, lines 49-65, wherein this reads over "an example input term, 'short-term'"; and See WICAL '560, C29-32, wherein this reads over "the search and retrieval system 100 receives, as input, user queries, and generates, as output, search results which, depending upon the mode of operation, identifies categories and documents"};

receiving at least one relationship between the new first concept and a second concept {See WICAL, col. 5, lines 16-19, wherein this reads over "[t]he learning system classifies the term 'short-term' in the 'economics' category"};

receiving a relationship type characterizing the at least one relationship {See WICAL, Figure 3; col. 3, lines 2-29, wherein this reads over "[t]he categories are arranged in a hierarchical structure that includes a plurality of levels"; and col. 4, lines 43-45, wherein this reads over "the parent category . . . includes the child categories"};

receiving a strength value characterizing the relationship {See WICAL, col. 10, lines 34-40, wherein this reads over "reflects the strength of the classification of the term for the category"}; and

representing the association between the primary term and the at least one related term {See BORGIDA, C7:L1-13, wherein this reads over "a set of binary relation definitions"; and C7:L14-40}, the at least one relationship and the relationship type to the user on the user interface {See WICAL '560, Figure 3; and C10:L36-62, wherein this reads over "[t]he example presentation shown in FIG. 3 provides a global view of the response to the users query"};

receiving a user request to add the new first concept to the machine-readable network of interrelated concepts {See WICAL '560, C11:L66-C12:L17, wherein this reads over "the linguist develops cross reference associations when two terms/ categories have a strong linguistic, semantic, or usage relationship"}; and

in response to the user request, creating the new first concept in the existing machine-readable network {See WICAL, col. 4, lines 25-28, wherein this reads over "[i]n addition to identifying the proper high level category to learn a term, the learning system determines the proper level of the hierarchy under the high level category to classify the term"} of interrelated concepts to expand the existing network of interrelated concepts by adding the new first concept to the existing network of interrelated concepts, wherein creating the new first concept comprises adding the primary term, the related term, the relationship between the first concept and the second concept, the relationship type {See BORGIDA, C7:L14-59 and C9:L44-66}, and the strength value {See WICAL '788, Table 1; and C9:L14-39} to the existing machine-readable network of interrelated concepts.

While WICAL may fail to expressly disclose the use of a user interface to represent term relationships, WICAL '560 discloses the use of an interface to provide a global view of relationships between concepts. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by WICAL with the invention as disclosed by WICAL '560. While WICAL may fail to expressly disclose the method step of adding a primary term, the related term, the relationship between the first concept and the second concept, and the relationship type to a network, BORGIDA discloses an invention wherein new concepts are integrated into a knowledge-based management system of concepts and relations. Lastly, while WICAL may fail to expressly disclose strength values for a concept, WICAL '788 discloses an invention wherein concept terms are associated with weights.

One of ordinary skill in the art would have been motivated to do these modifications so that concepts may be added to the network in response to a user request.

14. **As per dependent claims 2 and 21**, WICAL, in combination with WICAL '560, BORGIDA, and WICAL '788, discloses:

The method of claim 1, wherein representing the association comprises:

displaying a concept view {See WICAL, col. 17, lines 26-28,wherein this reads over "the learning system includes a user interface that allows the user to select a number of terms for which the user desires to manually verify"}.

15. **As per dependent claims 3 and 22**, WICAL, in combination with WICAL '560, BORGIDA, and WICAL '788, discloses:

The method of claim 1, further comprising receiving information characterizes a part of speech of the new first concept {See WICAL, col. 19, lines 38-42, wherein this reads over "the lexicon defines whether a particular word is a noun, a verb, an adjective, etc."}.

16. **As per dependent claims 4, 15, 23, and 34**, WICAL, in combination with WICAL '560, BORGIDA, and WICAL '788, discloses:

The method of claim 1, wherein the relationship comprises a hierarchical relationship or a lateral bond that indicates a proximity of the new first concept to the second concept in semantic space {See WICAL, Figures 1b, 3, and 7; and col. 9, lines 38-52, wherein this reads over "the semantic/lexical relationship between categories, is first measured in an up/down direction, and then, if applicable, in a left/right direction"}.

17. **As per dependent claims 5, 16, 24, 35, and 42**, it would be inherent for the relationship between the terms and categories to take the form of one of the following: kind of, has kind, part of, has part, member of, has member, substance of, has substance, product of, and has product. That is, in order for a term to be considered within a category, the relationship will minimally require that the term at least be either a "member of" the category.

18. **As per dependent claims 6, 17, 25, and 36**, WICAL, in combination with WICAL '560, BORGIDA, and WICAL '788, discloses:

The method of claim 1, further comprising receiving information characterizing a frequency of the primary term {See WICAL, col. 11, lines 6-9, wherein this reads over "[t]he learning system utilizes the cumulative total number of documents classified into a particular category for a term"}.

19. **As per dependent claims 7, 18, 26, and 37**, WICAL, in combination with WICAL '560, BORGIDA, and WICAL '788, discloses:

The method of claim 1, further comprising receiving information characterizing a likelihood that the primary term and the related terms imply the new first concept {See WICAL, col. 11, lines 52-54, wherein this reads over "a cumulative classification strength is assigned to each branch of categorization schema"; and lines 56-57, wherein this reads over "the learning system also includes determining whether the term is worth learning"}.

20. **As per dependent claims 8, 19, 27 and 38**, WICAL, in combination with WICAL '560, BORGIDA, and WICAL '788, discloses:

> The method of claim 1, further comprising receiving information characterizing a breadth of the new first concept {See WICAL, col. 7, lines 35-37, wherein this reads over "[t]he knowledge catalog, used to classify terms for learning, provides a unique infrastructure to accurately represent categories that define knowledge" and "a set of static ontologies"}.

21. **As per dependent claims 9 and 28**, WICAL, in combination with WICAL '560, discloses:

> The method of claim 1, further comprising receiving information indicating that the new first concept is offensive {See WICAL, col. 11, lines 62-63, wherein this reads over "[t]he learning system analyzes the contextual data to determine whether the term is too ambiguous to learn"}.

22. **As per dependent claims 10 and 29**, WICAL, in combination with WICAL '560, BORGIDA, and WICAL '788,discloses:

> The method of claim 1, further comprising receiving user data {See WICAL, col. 17, lines 9-10, wherein this reads over "a user may therefore re-categorize one or more phrases"} further describing the new first concept.

23. **As per dependent claims 11 and 30**, WICAL, in combination with WICAL '560, BORGIDA, and WICAL '788,discloses:

> The method of claim 1, further comprising receiving context information {See WICAL, col. 2, lines 3-5, wherein this reads over "[d]uring an accumulation phase, the learning system accumulates contextual data from the set of documents for the term"}.

24. **As per dependent claims 39 and 40,** it would have been obvious to one of ordinary skill in the art that related term of a primary term in a network of interrelated concepts may be an acronym or synonym.

25. **Claims 12-14, 31-33, 15-30, 34-38, and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wical et al (U.S. Patent No. 6,101,515, hereinafter referred to as WICAL), in view of Wical et al (U.S. Patent No. 6,038,560, hereinafter referred to as WICAL '560), and in further view of Borgida et al (U.S. Patent No. 5,806,060, hereinafter referred to as BORGIDA).

26. **As per independent claims 12 and 31**, WICAL, in combination with WICAL '560 and BORGIDA, discloses:

A machine-implemented method, comprising:

Receiving, from a user, a request to edit a first concept in an existing machine-readable network of interrelated concepts {See WICAL, col. 17, lines 5-9, wherein this reads over "a user that manually checks the categorization results of the learning system process brings to bear a broader semantic context"; and lines 26-28, wherein this reads over "allows the user to select a number of terms for which the user desires to manually verify"} wherein a concept comprises a normalized semantic representation and is expressed by a collection of terms;

representing the first concept {See WICAL, col. 17, lines 26-28,wherein this reads over "the learning system includes a user interface that allows the user to select a number of terms for which the user desires to manually verify"} on a display for the user, including displaying a first collection terms that express the first concept and a description of one or more existing relationships between the first concept and other concepts {See BORGIDA, C7:L14-59 and C9:L44-66} in the existing machine-readable network of interrelated concepts {See WICAL '560, Figures 3 and 10A-B};

receiving, from the user, at least one new relationship between the first concept and a second concept {See WICAL '560, C6:L7-21, wherein this reads over "[t]he search and retrieval system 100 permits a user to subsequently augment the classification and contextual information through content processing of the documents input by the user"};

receiving a relationship type characterizing a type of the at least one new relationship {See WICAL, Figure 3; col. 3, lines 2-29, wherein this reads over "[t]he categories are arranged in a hierarchical structure that includes a plurality of levels"; and col. 4, lines 43-45, wherein this reads over "the parent category . . . includes the child categories"};

receiving a strength value characterizing a strength of the at least on new relationship {See WICAL, col. 10, lines 34-40, wherein this reads over "reflects the strength of the classification of the term for the category"};

updating the machine-readable network of interrelated concepts to reflect the at least one new relationship, the relationship type, and the strength value; {See WICAL, col. 4, lines 25-28, wherein this reads over "[i]n addition to identifying the proper high level category to learn a term, the learning system determines the proper level of the hierarchy under the high level category to classify the term"; and col. 17, lines 9-10, wherein this reads over "a user may therefore re-categorize one or more phrases"};

representing the updated first concept on the display for the user, wherein the display includes a description of the at least one new relationship {See WICAL '560, Figure 3; and C10:L36-62, wherein this reads over "[t]he example presentation shown in FIG. 3 provides a global view of the response to the users query"}.

While WICAL may fail to expressly disclose the use of an user interface to represent term relationships, WICAL '560 discloses the use of an interface to provide a global view of

relationships between concepts. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by WICAL with the invention as disclosed by WICAL '560. While WICAL may fail to expressly disclose the method step of adding a primary term, the related term, the relationship between the first concept and the second concept, and the relationship type to a network, BORGIDA discloses an invention wherein new concepts are integrated into a knowledge-based management system of concepts and relations.

One of ordinary skill in the art would have been motivated to do these modifications so that concepts may be added to the network in response to a user request.

27. **As per dependent claims 13 and 32**, WICAL, in combination with WICAL '560 and BORGIDA, discloses:

> The method of claim 12, further comprising receiving a new strength value for one of the existing relationships between the first concept and a third concept {See WICAL, col. 17, lines 48-53, wherein this reads over "classification strengths are generated from the initial bottom to top analysis of the categorization schema. During the subsequent top to bottom analysis, the learning system, for this example categorization schema, eliminates nodes that contain insufficient data (e.g. noise nodes)"}.

28. **As per dependent claims 14 and 33**, WICAL, in combination with WICAL '560 and BORGIDA, discloses:

> The method of claim 12, further comprising receiving a new relationship type for one of the existing relationships between the first concept and a third concept {See WICAL, col. 17, lines 9-10, wherein this reads over "a user may therefore re-categorize one or more phrases"}.

29. **As per independent claim 41**, WICAL, in combination with WICAL '560 and BORGIDA, discloses a user display as recited in the present claim. See WICAL ' 560, Figures 9C and 10A-B.

Response to Arguments

30. Applicant's arguments filed 2 September 2008 have been fully considered but they are not persuasive.

a. Rejections under 35 U.S.C. 103

Applicant asserts the argument that "letters are not terms." See Amendment, page 13. Specifically, Applicant asserts the argument that WICAL '515 fails to disclose

the recited feature of "concept" because "a combination of letters 'to create discernable terms and phrases' does not 'read upon' such an expression/representation of concepts using terms." See Amendment, page 13. The Examiner respectfully disagrees in that under the broadest reasonable interpretation, the use of individual words or phrases to define a category would readily read upon the recited feature of a "normalized semantic representation." That is, wherein letters are combined to create discernable terms and phrases, said terms and phrases would sufficiently read upon the requirement of "normalized semantic representations."

Additionally, Applicant notes that the combination of letters to spell terms and phrases does not read upon a concept which is "expressed by a collection of terms." See Amendment, page 14. The Examiner respectfully disagrees in that Wical discloses that a user may select a number of terms for categorization purposes.

Additionally, Applicant asserts the argument that Wical '515 itself does not consider the terminology described therein to be concepts that comprise normalized semantic representations. Specifically, Applicant relies upon NPL document "Ontology Learning from Text: Methods, Evaluation and Applications," P. Buitelaar et al. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "normalized semantic representations") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification or other documents, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Accordingly, for the aforementioned reasons, the claim rejections under 35 U.S.C. 103 are maintained.

Conclusion

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL KIM whose telephone number is (571)272-2737. The examiner can normally be reached on M-F, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tony Mahmoudi can be reached on (571) 272-4078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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